[435] The price per hundred kilograms is from 50 to 54 francs in Luang-Prabang, 62 francs in Pak-Lay, from 62 to 70 francs in Nong-Khay, 50 francs in Cammon, from 75 to 83 francs in Song-Khone, from 66 to 87 francs in Saravane, from 70 to 83 francs in Bassac, from 83 to 95 francs in Khong, 58 francs in Attopeu, from 50 to 83 francs in Stung-Treng, 133 francs in Pnom-Penh, 140 francs in Cholen (1) and from 80 to 120 francs in

(1) At this market cardamom from Pursat brings from 625 to 830 francs per hundred kilograms.

Korat.

4. Cinnamon (Cinnamomum zeylanicum. Kai-Hom in Laotian).

The cinnamon tree must have been cultivated at one time in the territory of Vien-Tiane. Then the inhabitants were driven out as a result of foreign incursions and abandoned their gardens, which were gradually invaded by brush. The harvesting of cinnamon has since become a scavenging operation without any form of cultivation. For several years now, doubtless in consequence of the many requests which were made when the Customs service tried to establish a monopoly of this product in Annam, [331] [Illustration] [332] [Blank page] [333] the inhabitants have once more begun to maintain the cinnamon trees and to give them some attention. Plantations have even been started, and this propitious initiative should be encouraged.

5. Indigo (Kok-Kam and Kok-Hom, depending on whether the Indigofera tinctoria or the Indigofera anil is designated).

These two plants are not always scavenging products, since the greater part of Laotian indigo comes from crops grown on the banks of the Mekong and its chief tributaries.

There is also an indigo-bearing liana which grows wild. The Laotians call this "Bouok-Khua".

In Laos the preparation of indigo is extremely simple. The fresh leaves and stalks of the different varieties of indigo plants are put to soak in wooden vats containing water and an acid element, usually the acid of lemons or limes. After a certain time the leaves are removed, then lime is precipitated in the water and the mixture is violently stirred. The lime fixes the dye and is deposited at the bottom of the vats, which are exposed to the air. When the clear water which rises to the surface has been completely evaporated, a hardened mass which is the indigo is left at the bottom of the vat. This product is not exported, but serves only for local consumption. Its price varies between 12 and 15 francs per hundred kilograms.

Its price varies between 12 and 15 francs per hundred kilograms. 000

6. Catechu (Sisiet). 824

Catechu is produced from a decoction of the bark of two varieties 314
of trees, the catechu acacia and the leafy butée. 276

This product, which is used in making the national masticatory together with betel, betel nuts and lime, is consumed, in the large centers of Upper Laos, in the form of a dry residue obtained from a decoction of the bark. Generally, however, it is the bark itself which is consumed after it has been broken up into small pieces.

Natural sisiet takes the form of shreds of bark about a cubit (.45 meter) long by four centimeters wide and one centimeter thick. The shreds are tied together in packs of twenty-five or fifty, depending on the region.

The whole production is consumed locally. The natives [334] [438] go into the forest at points where suitable trees are to be found, bundle up the pieces and load them on great rafts which go down from Pak-Lay and Vien-Tiane to Bassac and even to Khong.

At Pak-Lay sisiet is worth only 7 francs and 50 centimes per [435] hundred pieces, but it naturally costs more the further away one goes from the centers of production.

7. Curcuma (Khi-Mine). 824

This plant, of the Zingiberaceae family, has a rhizome which 314
contains an orange-yellow coloring matter used for dyeing silk and 386
cotton.

Sometimes the inhabitants (chiefly the women and children) 302
rub their whole body with curcuma scrapings after a bath. The application of curcuma to the wet skin, which acquires a light yellow color, is said by the natives to ward off mosquitoes and keep the skin fresh.

Up to the present time this product has not formed the basis of [438] any foreign trade. It is sold in small amounts on the markets of Laos.

8. Ginger. 263

The ginger which is called "Mak-Khing" in Laotian is the Zingi- 824
ber officinale or gray ginger. Used as a condiment by the entire 314
population, this product does not enter into trade. Its price varies [435] between 12 francs and fifty centimes and 16 francs and fifty centimes per hundred kilograms.

9. Roucou. 824

The roucou, or fruit of the Roucouyer Bixia, is called "Kane- 314
Mak-Soum-Phon" in Laotian. Literally, this means Seed of an 386
acidulous mountain fruit. It is used to make red and orange dyes

824 314 386 when mixed with curcuma. The trees are found in the forest, and sometimes in gardens.

10. Yams.

269 241 The yam is an edible tubercle of the Dioscorea family. It is represented by two varieties, the white and the black, which are called "Mane-Phuek-Khao" and "Mane-Phuek-Dam" in Laotian. These tubercles are the main standby when there is a scarcity of rice and [335] maize, but in ordinary times they are used only to supplement the usual diet.

11. Taro or cush-cush (Mane-Pa).

Taro is also a food plant of the Aroïdées caladiées genus (Caladium esculentum). Like the yam, it is one of the most useful edible tubercles in times of famine.

12. Medicinal plants.

824 278 Designated by the generic name "Ya" in Laotian, these plants are represented by special types of orchids, roots, bark, berries, leaves and even pieces of wood of different kinds, the whole forming an assortment of medicaments.

[438] The Khas are the ones who collect these various products from the depths of the forests, and they trade them either to Chinese or to Laotians for money or other goods.

[435] Certain of these plants and barks are used by the Laotians while others, such as the leaves from orchid plants, for example, are purchased by Chinese merchants at prices which vary between 33 and 62 francs per hundred kilograms.

13. Cloves.

The clove tree (Caryophyllus aromaticus. Kane-Phou in Laotian) is quite scarce in Laos. Cloves are mixed with various ingredients in masticatories or are taken as medicine.

Cultivation of the clove tree ought to be developed in Laos because of the high value of its flowers which, when dried on the tree, constitute the cloves of commerce.

14. Beeswax (Phung).

222 [231] 314 [438] Beeswax is much sought-after in Laos, where a great deal of it is consumed. It is a scavenging product par excellence since, except in the Sib-Song-Pahn-Na, the inhabitants do not practice apiculture and are content to go into the forest and look for honeycombs in order to extract the wax. The latter is used for domestic needs and for worship ceremonies. It also forms the basis of quite an important trade.

149: Reinach--250 G-3 (no date) 1901 AM1 Indochina
Laotians AM8

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19. Miscellaneous resins.

Several trees, such as the "Kok-Mai-Niang, Kok-Mai-Tabeng, [Illustration here] Kok-Mai-Sak" (1), etc., yield an oleo-resin which,

(1) See Appendix XX.

when mixed with paddy husks, is used to make torches and a siccative, shiny extract which is called "Nam-Mane-Niang," and again a kind of pitch (Khi-Si) which is used to caulk pirogues and to smear various basketwork receptacles so as to make them watertight. It is similar to damarine.

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The production of these resins is limited to local needs.

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20. Black lacquer.

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The black lacquer of Laos is a natural black varnish, thick and [343] solid, which is called "Nam-Kieng." It is secreted by the "Kok-Mai-Nam-Kieng."

Nam-Kieng is used to lacquer racing pirogues, elephant palanquins, pagoda columns and statues, frames, receptacles of different kinds, sword sheaths, etc. The lacquer producing trees grow only in certain localities, and the varnish is not exported. Its price varies throughout the land between 62 and 75 francs per hundred kilograms.

435

It would be of interest to identify this lacquer with that of Japan, and to study the question as to whether it might not be possible to increase the number of trees which produce it with a view towards making it the basis of an export trade, at least to the countries bordering on Laos.

21. Cunao (the mock gambier, Mak-Soua in Laotian).

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The cunao is a brownish tubercle used instead of catechu, the color of which it has, for dyeing cloth. It is found in Cammon, in a part of the Hua-Pahn and on the right bank of the Nam-Hou. This product is bought mainly by Annamites and Chinese, who use it in Annam and Tonkin for dyeing the peasants' work clothes.

386

433 word, as regards everything connected with housing, furnishings,
472 clothing, household articles, etc. Everyone--men, women and even
463 children-- [454] is able to make the ordinary necessary articles by means of very simple methods and rudimentary tools. Thus it may be said that each house and each family represents a village in miniature.

The only industries really worthy of the name are embroidering on cloth, jewelry-making and working with gold and silver, ironmongery, brass-founding, pottery, basketry, the manufacture of certain lacquered articles, paper-making, wood and ivory carving, fresco painting, gold-washing and especially the making of pirogues, in which the natives show remarkable skill.

286 **Weaving.** The weaving of certain kinds of silk goods with
386 various shaded effects and often spangled with gold, as well as embroidering on cloth, is practiced by a certain number of women in every locality which is of any importance.

The looms used for weaving are extremely simple, and yet brocaded stuffs are made in which the designs are obtained, as before the invention of the Jacquard loom, by isolating or alternatively raising certain woof threads by means of thin strips of bamboo.

Vegetable dyes are used, that is to say that they are produced by trees or plants which grow in the country. Dyeing methods are simple, yet despite this fact the colors last for a long time thanks to a mordant composed of alum or lemon juice. The fundamental colors are blue (indigo), red, yellow and black. With the aid of these dyes the women are able, either by suitably proportioned mixtures or by various juxtapositions on the threads or on the cloth, to obtain a great variety of shades.

For some fifteen years now tinctorial powders have also been used which have an aniline base and are of German origin. But these dyes fall far short of being as colorfast and long-lasting as the local dyes. Their colors do not merge as well, and with them it is impossible to obtain the harmonious shades which the tinctorial products of Laos give to cloth and to thread.

283 [455] For spangled cloth goods and embroidery, the gold thread
28[illegible] in most widespread use is the one made by the Chinese. It consists of a strand of cotton on which a strip of paper gilded with fine gold a few tenths of a millimeter thick is wound in a spiral. Attempts have been made to introduce gold thread of European manufacture, but it has not met with favor on the part of the specialists, who have preferred the Chinese thread.